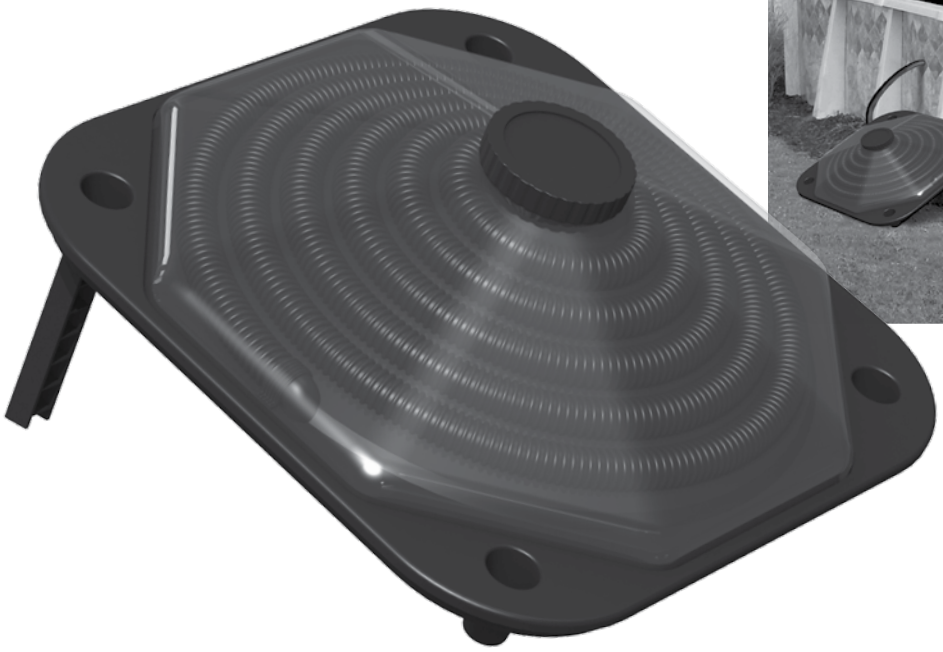
POOLMASTER®

We Make Water Fun!

Above-Ground Pool

Solar Heater

Calentón Solar Para Alberca Sobre Tierra



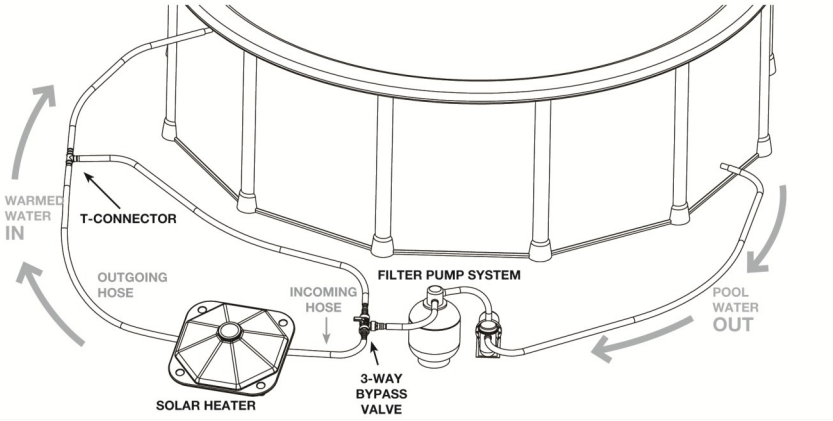
INSTRUCTIONS

Read instructions BEFORE assembling!
KEEP THESE INSTRUCTIONS for future reference.

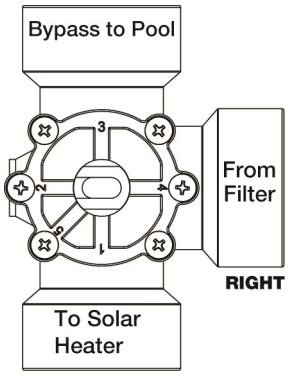
IMPORTANT INFORMATION

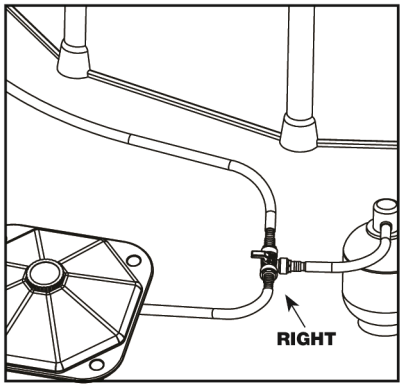
PLEASE READ **BEFORE**
SETTING UP YOUR SOLAR HEATER!

IMPORTANT NOTE #1 : It is critical to set-up the 3-Way Bypass Valve in the **correct order**—between the **Filter / Pump** and **Solar Heater**. Although your pool set up may vary, the order of connections can not vary. *Refer to page 6 of the instructions for detailed information.*



IMPORTANT NOTE #2 : It is critical that the 3-Way Bypass Valve is **oriented** in the correct way for proper set up. Your pool set up may vary. *Refer to page 6 of the instructions for detailed information. Incorrect set up may cause severe damage*





IMPORTANT NOTE #3 :

- Know the horsepower of your pump
- Note the markings on the 3-Way Bypass Valve and review the different positions that will best suit your needs
- Ideal setting for the 3-Way Bypass Valve is **position 5** (must have a 1/2 horsepower pump or greater)
- Use **position 1** on the 3-Way Bypass Valve to do the following:
    1. Stop the flow of water through the solar heater—recommended for nightly shut off
    2. Backwashing your filter or vacuuming your pool

THANK YOU FOR YOUR PURCHASE!

We know that you and your family will enjoy the warming water that the Poolmaster® Solar Heater for Above-Ground Pools will provide. We encourage you to read through all of the instructions before assembling your Solar Heater to maximize its performance, extending your swimming season. If you have any questions, please do not hesitate to contact us at 1-800-854-1492.

⚠ WARNING:

- **Carefully read and adhere to all notations and safety warnings mentioned within these instructions. Failure to follow these instructions as outlined can cause damage to the Solar Heater itself, injury, or death.**
- **Please do NOT allow children to operate the Solar Heater.**
- **Make sure that the INTAKE VALVE is closed off when installing or working on your Solar Heater to avoid water flow from the pool return.**
- **Install your Solar Heater away from the pool to prevent children from using the heater as a stepping stool into the pool -**
  DO NOT STEP ON HEATER.
- **DO NOT service your Solar Heater while the pool pump is running.**
- **NEVER use any petroleum based lubricants on your Solar Heater, as this will destroy the parts.**
- **Your Solar Heater is to be installed between the filter and pool water return inlet, AFTER the water is filtered. The heater must come AFTER the filter to prevent buildup in the hoses.**
- **Before loosening any threaded connections on your filter pump or pool, be sure that the suction and pressure hoses on the filter are closed or blocked to prevent water flow.**
- **Do not remove Solar Heater cover unless for maintenance purposes only.**

EVERYTHING YOU NEED TO KNOW

FOR OPTIMAL PERFORMANCE:

- Place your Solar Heater on a solid surface.
- Make sure that the Solar Heater is lower than your pool's water level.
- Make sure your Solar Heater is in a location that has the most SUN EXPOSURE for optimal heating effectiveness.
- Make sure your Solar Heater is a safe distance away from your pool and not in the path or traffic of outdoor activities.

GENERAL ASSUMPTIONS:

- Your Solar Heater is for above-ground pool use only
- Your pool must be set up and filled with water
- Your above-ground pool has a pump-operated water filtering system already set up with the necessary hoses needed to feed water in and out of your pool and filter system

HOW DOES THE SOLAR HEATER WORK?

Solar heating is a cost-effective, eco-friendly way to heat your pool. Here's how it works!

- Your solar heater connects between your filter pump and pool return inlet through two hose connections
  - An INCOMING hose will feed your pool's cold, filtered water out of your filter and through one port on the Solar Heater
  - An OUTGOING hose will feed the sun-warmed water back out to your pool from the other port on the Solar Heater
- **Between the INCOMING hose and the OUTGOING hose, the water travels through the solar coils where it is heated, warming the temperature of your pool water up to 10° warmer under optimal conditions.**
- **You have flexibility in how you regulate your pool's temperature, depending upon how you set up your Solar Heater.**

WHAT SIZE IS YOUR POOL?

- **The size of your pool will affect how many Solar Heaters you will need to achieve the optimal water temperature**
- **One unit will effectively heat a pool size of 15 – 18 feet with a standard depth of 3 feet**

USAGE CHART

				Recommended Heaters*		
Pool Size	**Sq. Ft.**	**Depth**	**Approximate Gallons**	**1**	**2**	**3**
10 ft Round	79	30”	1,200	**1.26**	**0.63**	**0.40**
12 ft Round	113	36”	2,100	**2.21**	**1.11**	**0.70**
15 ft Round	177	48”	4,200	**4.42**	**2.21**	**1.40**
18 ft Round	254	48”	6,100	**6.42**	**3.21**	**2.03**
21 ft Round	346	52”	8,900	**9.37**	**4.68**	**2.97**
24 ft Round	452	52”	11,600	**12.21**	**6.11**	**3.87**
27 ft Round	572	52”	14,700	**15.47**	**7.74**	**4.90**
12 x 24 ft Oval	226	48”	5,400	**5.68**	**2.84**	**1.80**
14 x 28 ft Oval	308	48”	7,300	**7.68**	**3.84**	**2.43**
15 x 30 ft Oval	353	48”	8,400	**8.84**	**4.42**	**2.80**
16 x 32 ft Oval	402	52”	10,300	**10.84**	**5.42**	**3.43**
18 x 33 ft Oval	466	52”	12,000	**12.63**	**6.32**	**4.00**

DAYS TO HEAT

**** Heating time and number of units is approximate and is based on optimal sun conditions***
Heating temperature is based on 5˚F

PARTS LIST - Please check to make sure you have all these parts BEFORE you begin

Your Solar Heater comes with everything you need to assemble ONE Solar Heater unit PLUS an additional Bypass Kit of parts if you are assembling more than one solar unit or you want the flexibility to regulate your water temperature (recommended use).

1 Solar Heater

A: 4 Hoses (1 1/2" x 3' 4")

B: 2 Side Hose Connectors

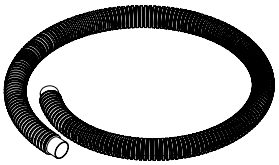
C: 2 O-Rings

D: 8 Hose Clamps

E: 2 1 1/4" – 1 1/2" Hose Reducers

F: 1 Water Controller

A



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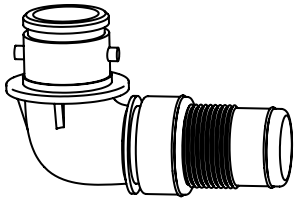

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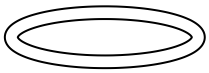

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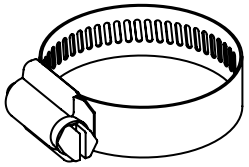

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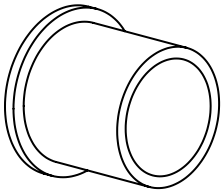

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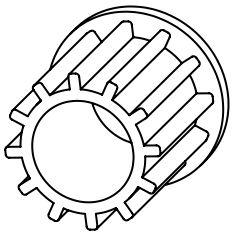


1 BONUS Bypass Kit

(for use in regulating water temperature / direction)

G: 1 3-way Valve

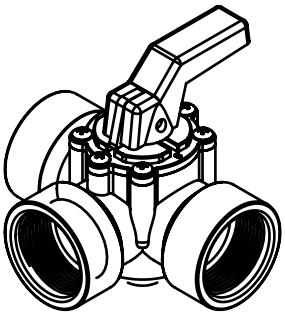
H: 1 T-Shape Hose Connector

J: 3 Adaptors

K: 6 Hose Clamps

L: 1 Roll of Teflon Tape

G



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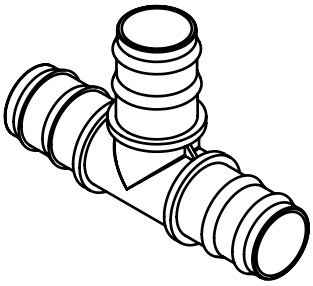

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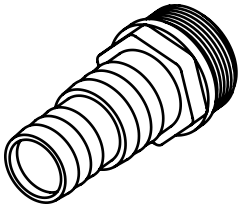

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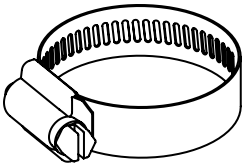

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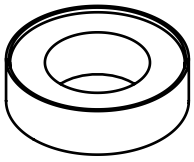


CAUTION

INCORRECT BYPASS KIT SET UP WILL CAUSE ***SEVERE DAMAGE*** TO YOUR UNIT!

PLEASE READ AND UNDERSTAND INSTRUCTIONS BEFORE SETTING UP YOUR UNIT!
Refer to page 5 for complete Bypass Kit set-up directions.

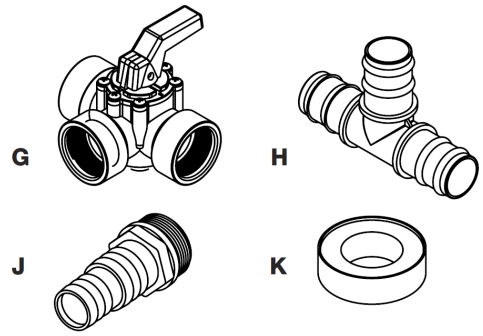
Bypass Kit Components:

G—(1) 3-way Bypass Valve

H—(1) T-Shape Hose Connector

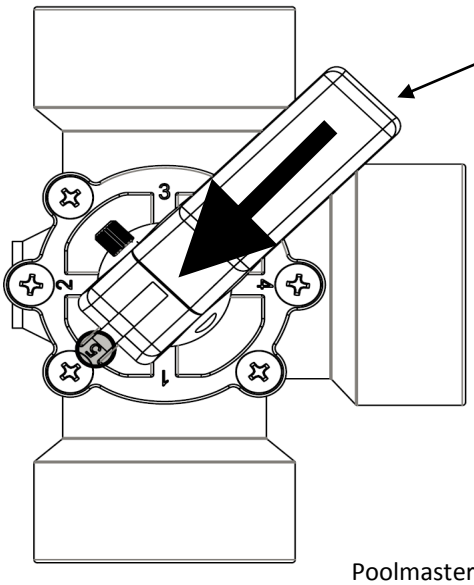
J—(3) Adaptors

K—(1) Roll of Teflon Tape



Understanding how the handle functions and what the different NUMBERED positions mean is critical. **Press down** to turn the handle. Practice changing the handle to the different NUMBERED positions and visually look inside the 3-Way Bypass Valve to see how the NUMBERED positions will affect the water flow. PLEASE UNDERSTAND THIS PRIOR TO MAKING ANY HOSE CONNECTIONS.

It is recommended to use position #5. However, you **must** have a 1/2 Horsepower pump or greater.

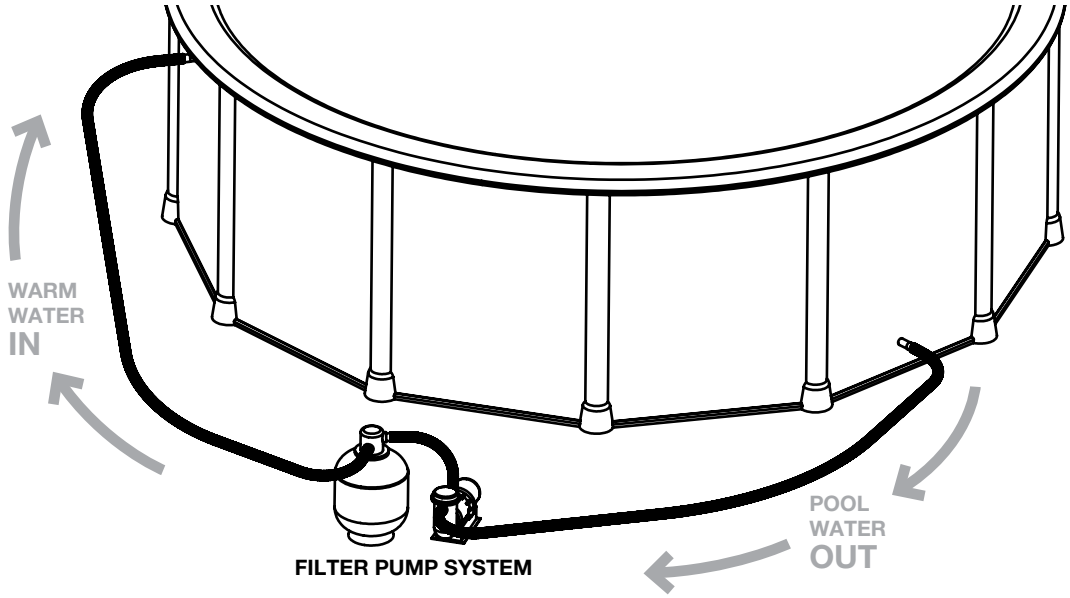


PLEASE READ AND UNDERSTAND BEFORE SETTING UP YOUR UNIT!
Refer to page 5 for complete Bypass Kit set-up directions.

SET-UP OPTIONS

DIAGRAM 1 - Pool & Basic Filter System

Your pool should have this basic setup:

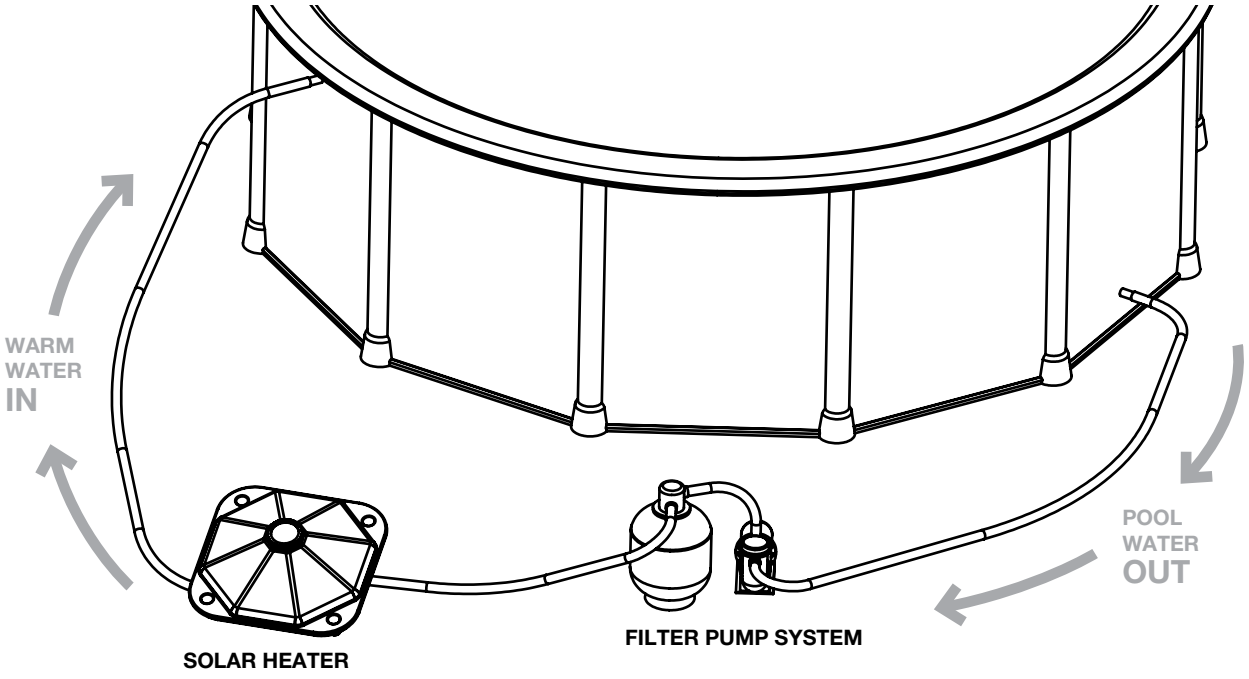


BEFORE YOU BEGIN

- Turn off your filter pump before you begin your installation process
- Be prepared to block the water from coming out of your pool and filter when you disconnect the filter pump hose in the next step.

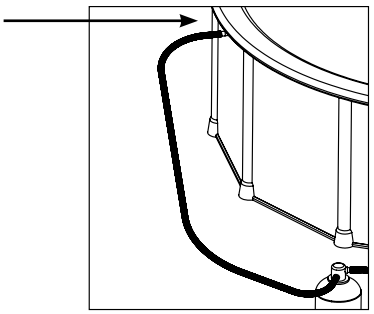
DIAGRAM 2 - Using One Solar Heater with NO Bypass Kit (BASIC SETUP)

If you want to have solar-warmed water constantly flowing through your pool, this is your recommended set up.



- Detach the end of the hose that connects to your pool where the warm water is returned.

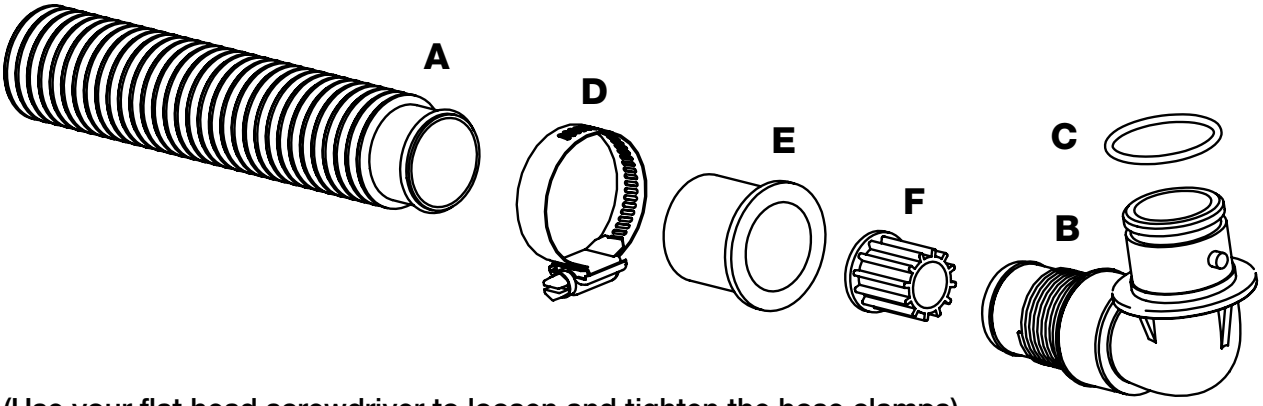
  This unattached end will be prepared as the incoming hose to the Solar Heater.



To prepare this hose end, follow Diagram 3 for order of parts and connection to each other.

DIAGRAM 3
INCOMING HOSE CONNECTION COMPONENTS

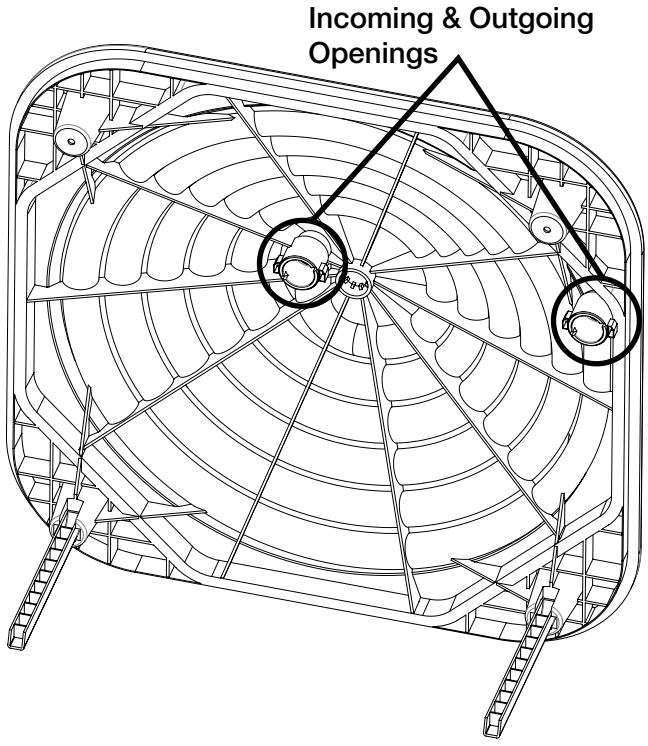
Hose end (A) + clamp (D) + hose reducer (E) + water controller (F) + side hose connector (B) + O-ring (C)



(Use your flat head screwdriver to loosen and tighten the hose clamps)

- Turn the Solar Heater unit over and locate the two openings – one will be used for an INCOMING hose from the filter and the other for an OUTGOING hose back into the pool. It does not matter which opening you use for which purpose, but note that whichever opening you use for the hose coming INTO the Solar Heater, you MUST USE THE WATER CONTROLLER COMPONENT (F) noted in Diagram 3.

  Make sure you know which opening is INCOMING and which is OUTGOING.



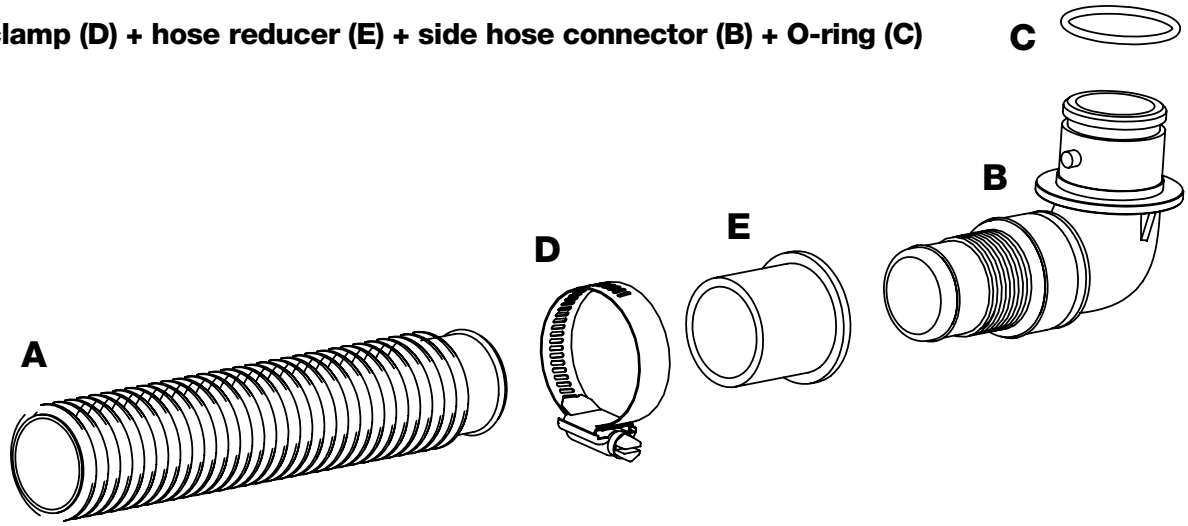
- Once you've assembled the Diagram 3 components onto the end of the filter hose, insert the prepared end into the opening on the underside of the Solar Heater that you designated as the INCOMING opening.

  NOTE: There are notches on the side hose connectors that need to match to the notch holes on the Solar Heater openings. Once they are matched up, make sure you turn to lock in place.

- With a new hose, prepare one end as your OUTGOING hose connection by following Diagram 4 for order of parts and connection to each other. This connection will direct the warmed water out of your Solar Heater and into your pool.

DIAGRAM 4
OUTGOING HOSE CONNECTION COMPONENTS

Hose end (A) + clamp (D) + hose reducer (E) + side hose connector (B) + O-ring (C)



(Use your flat head screwdriver to loosen and tighten the hose clamps)

- Once you've assembled the Diagram 4 components, insert the prepared end with side hose connector into the other opening on the underside of the Solar Heater that you designated as the OUTGOING opening. NOTE: ONCE YOUR SIDE HOSE CONNECTOR IS IN PLACE, MAKE SURE YOU TURN TO LOCK.

- Turn your Solar Heater over. You should now have your Solar Heater connected to an INCOMING hose from your filter (1) and OUTGOING hose (2). Connect the unattached end into your pool opening where the warm water from your filter is returned (3).

- Congratulations! You are completely assembled. Your final assembly should look like Diagram 2.

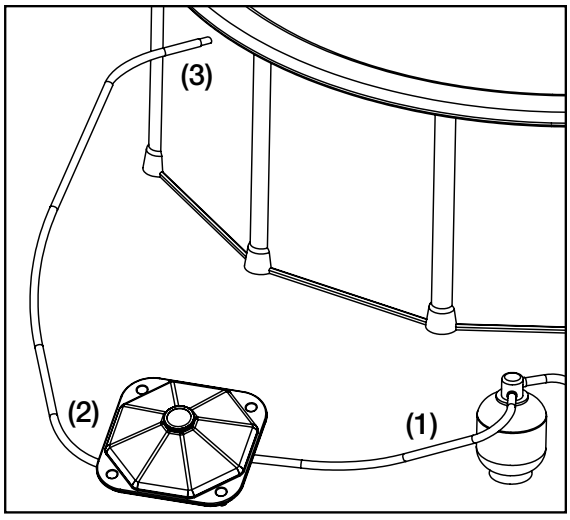
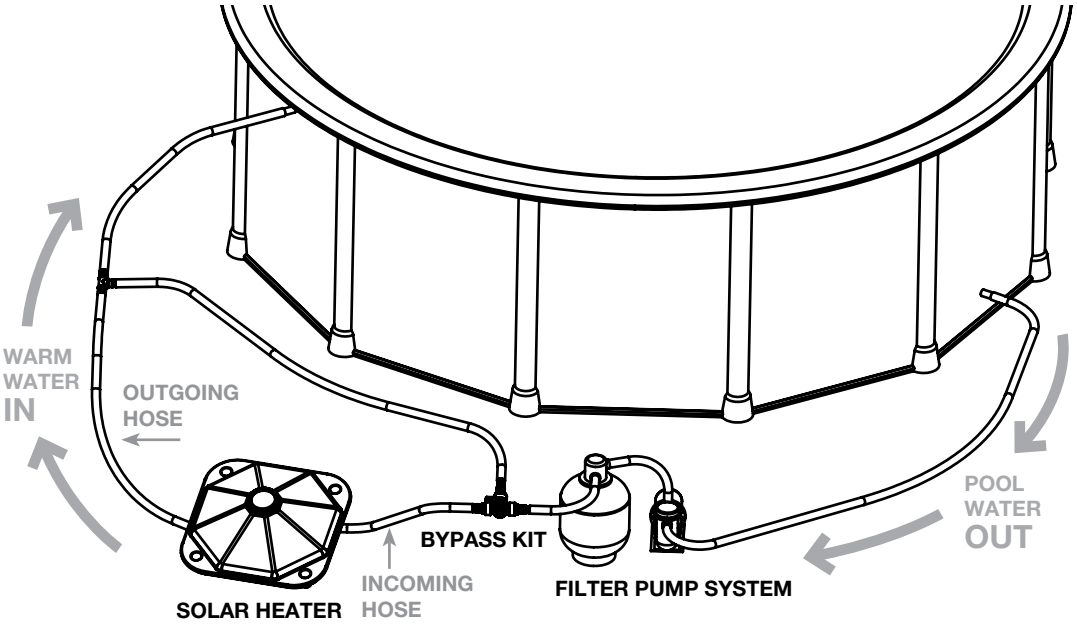


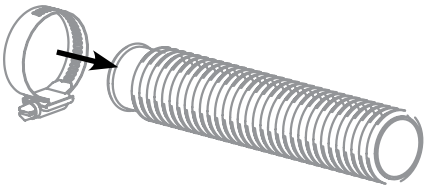
DIAGRAM 5 - Using One Solar Heater WITH Bypass Kit (OPTIMAL SETUP)

To best regulate your water temperature, we recommend the following set-up.

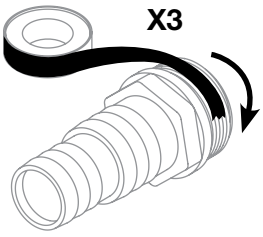
- This set up allows you to regulate the temperature using a 3-way valve which controls the amount of warmed water that flows back into the pool.
- The 3-way valve allows the water to do the following:
  1. Stop the flow of water through the solar heater
  2. Maintain the water flow at all times through the solar heater
  3. Maintain a flow rate of 50% through the solar heater which best maintains the desired temperature (by regulating a slower water flow through the heater, the water will have more time to warm in the unit before flowing back into the pool.)



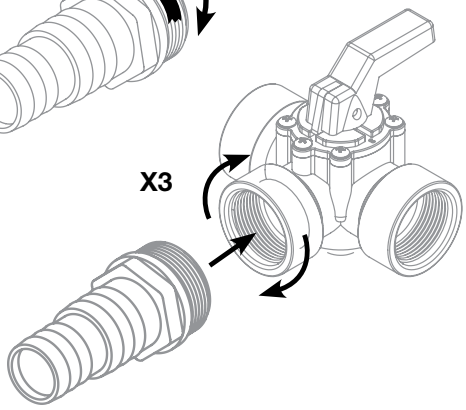
- Place hose clamps over all hose ends.



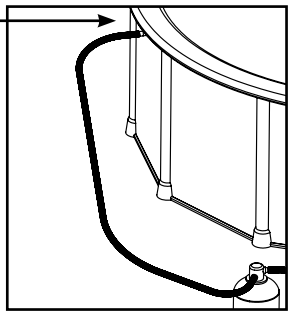
- Prepare all three adaptors (J) by wrapping the threaded ends with teflon tape (L).



- Screw the prepared ends of the adaptors into the three openings of the 3-way valve.

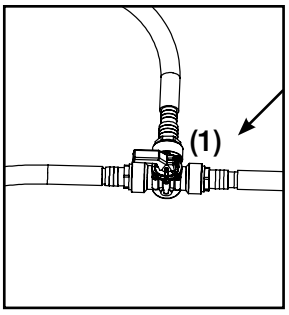


- Detach the end of the hose that connects to your pool where the warm water is returned.



- With this unattached end loosen and place a hose clamp over the end of the hose & insert over the adapter on the right side of the 3-way valve (1).

  Make sure the hose is pushed all the way to the end of the adaptor. Tighten the hose clamp.



- With a new hose, insert over the left side of the 3-way valve (2).

  Make sure the hose is pushed all the way to the end of the adaptor. Tighten the hose clamp.

- Prepare the unattached hose end following Diagram 6 for order of parts and connection to each other.

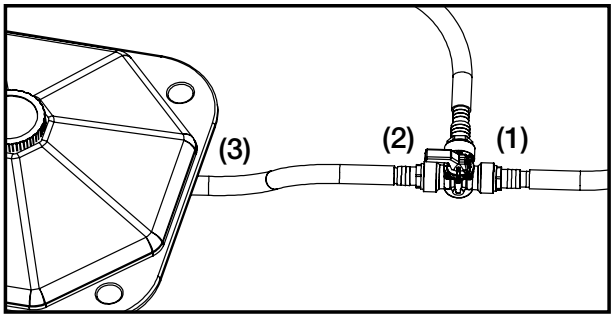
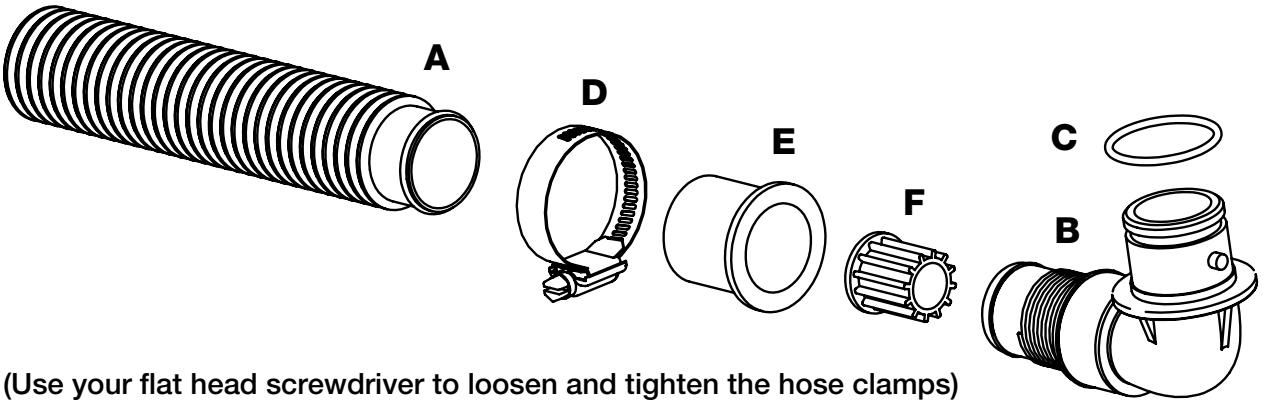


DIAGRAM 6
INCOMING HOSE CONNECTION COMPONENTS

Hose end (A) + clamp (D) + hose reducer (E) + water controller (F) + side hose connector (B) + O-ring (C)



(Use your flat head screwdriver to loosen and tighten the hose clamps)

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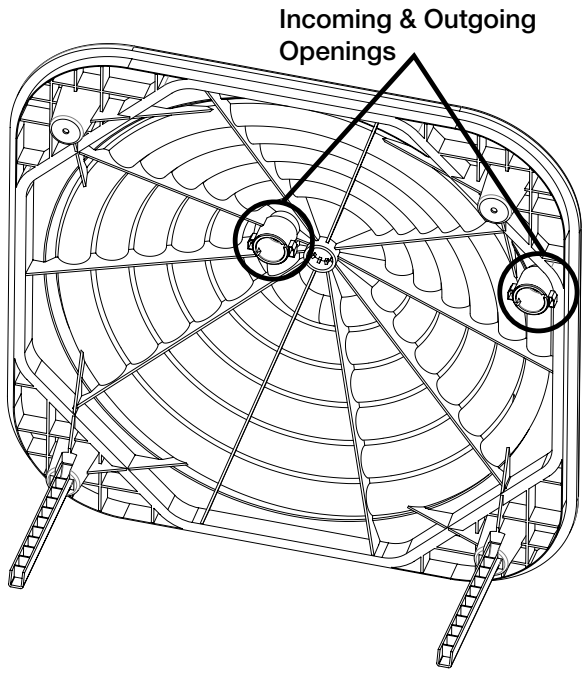
  Make sure you know which opening is INCOMING and which is OUTGOING.



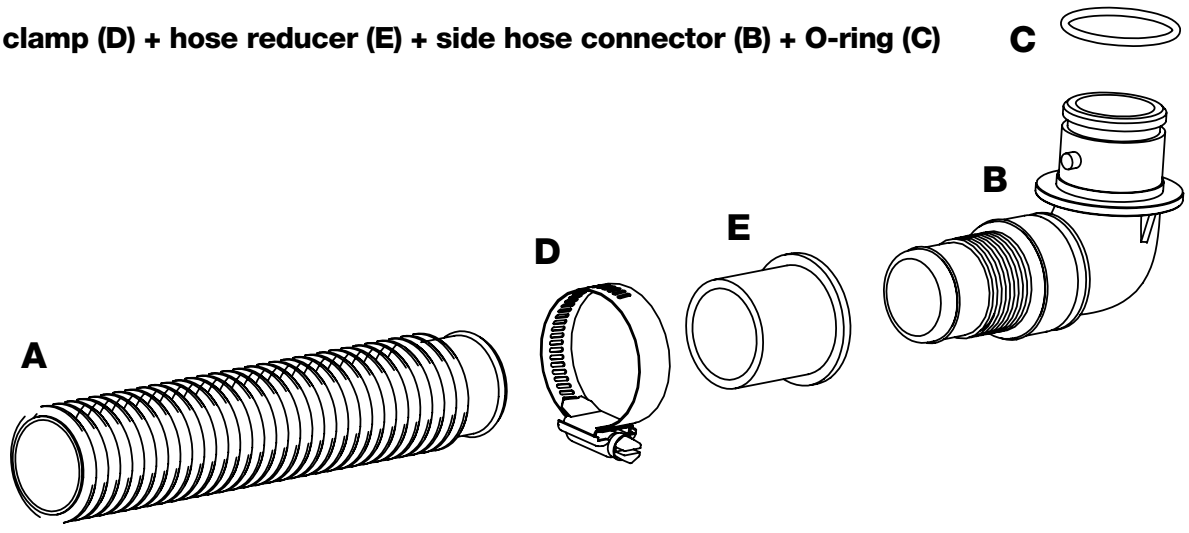
- Once you've assembled the Diagram 6 components onto the end of the hose, insert the prepared end into the opening on the underside of the Solar Heater that you designated as the INCOMING opening.

  NOTE: There are notches on the side hose connectors that need to match to the notch holes on the Solar Heater openings. Once they are matched up, make sure you turn to lock in place.

- With a new hose, prepare one end as your OUTGOING hose connection by following Diagram 7 for order of parts and connection to each other. This connection will direct the warmed water out of your Solar Heater and into your pool.

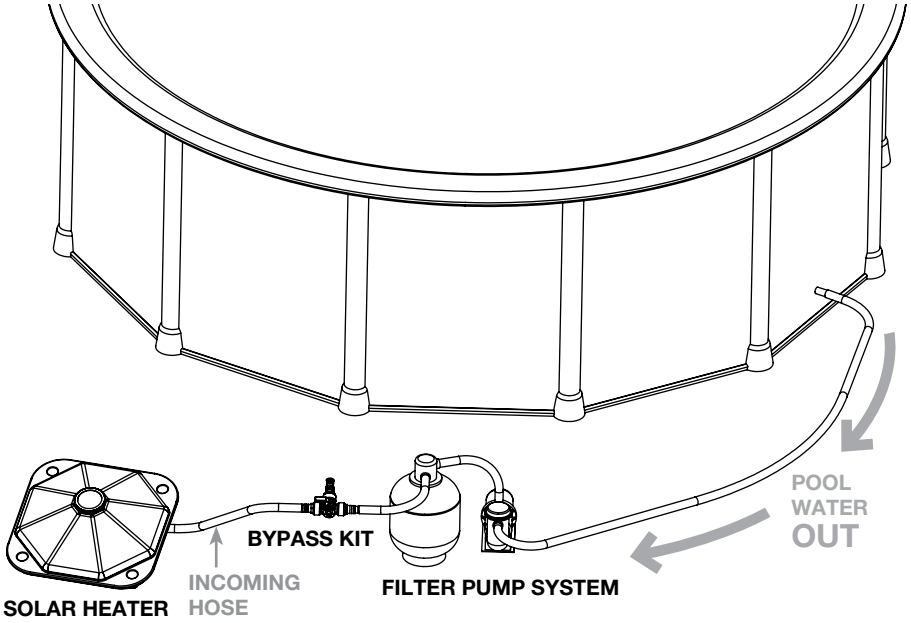
DIAGRAM 7
OUTGOING HOSE CONNECTION COMPONENTS

Hose end (A) + clamp (D) + hose reducer (E) + side hose connector (B) + O-ring (C)



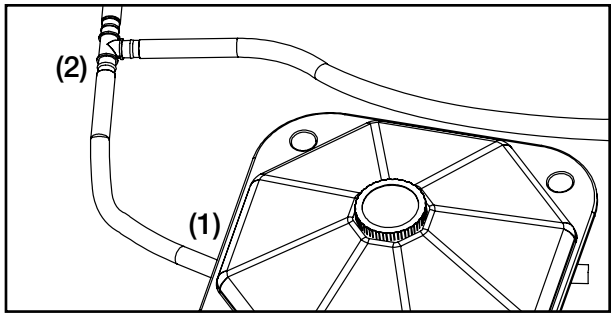
(Use your flat head screwdriver to loosen and tighten the hose clamps)

- Once you've assembled the Diagram 7 components, insert the prepared end with side hose connector into the other opening on the underside of the Solar Heater that you designated as the OUTGOING opening. NOTE: ONCE YOUR SIDE HOSE CONNECTOR IS IN PLACE, MAKE SURE YOU TURN TO LOCK.
- Turn your Solar Heater over. You should now have your Solar Heater connected to an INCOMING hose and OUTGOING hose.



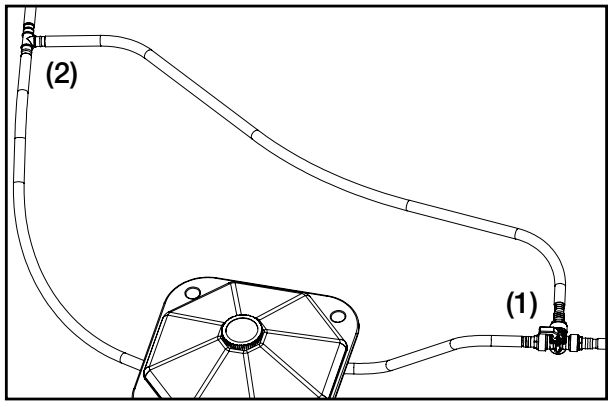
- Connect the loose end of the Solar Heater's OUTGOING hose (1) to the left end of the T-connector (2).

  Make sure the hose is pushed all the way to the end of the adaptor. Tighten the hose clamp.



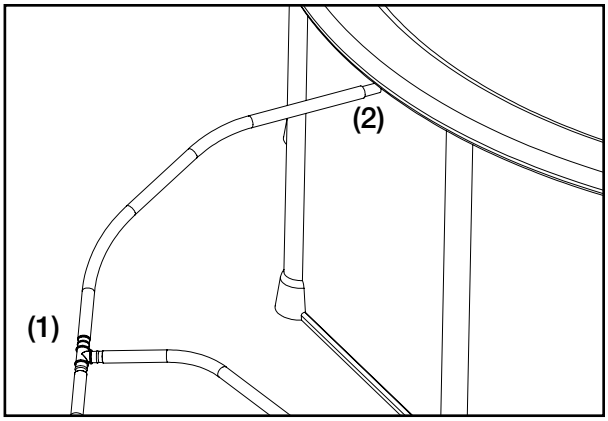
- With a new hose, attach one end to the center opening of the 3-way valve (1) and the other end into the center of the T-connector (2).

  Make sure the hose is pushed all the way to the end of the adaptor. Tighten the hose clamp.



- With the last hose, connect one end to the last T-connector opening (1) and the other end into your pool (2).

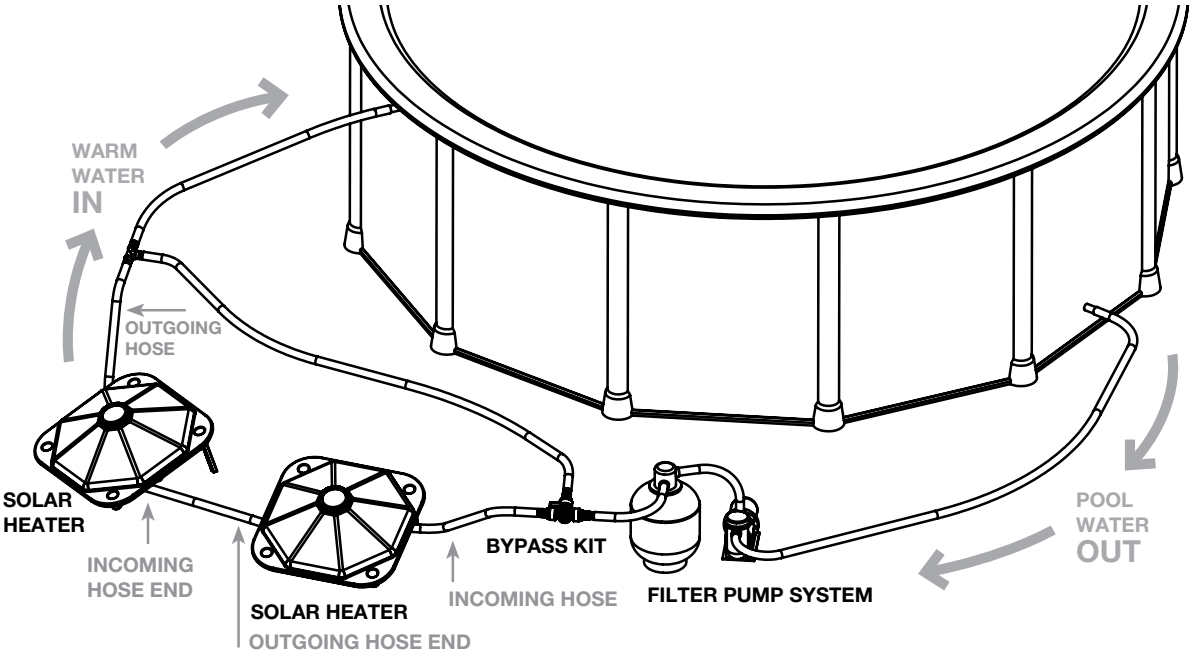
  Make sure the hose is pushed all the way to the end of the adaptor. Tighten the hose clamp.



- Congratulations! You're finished with your assembly. Now, let's learn how to use your 3-way valve.

DIAGRAM 8 - Using Multiple Solar Heater WITH Bypass Kit

To best regulate your water temperature for a larger pool size, we recommend this setup.

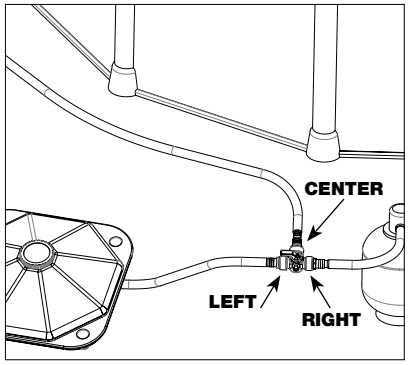


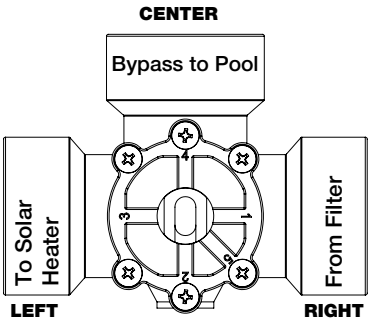
1. Purchase an additional Poolmaster Solar Heater

2. Follow the set-up instructions in Diagram 5 - **Using One Solar Heater WITH Bypass Kit** bridging the two units together using the incoming and outgoing hose connection method shown in diagrams 6 & 7.

OPERATING YOUR 3-WAY VALVE

- As mentioned above, your 3-way valve is to help you regulate your warm water flow and takes into account the horse power of your filter pump. The top of the 3-way valve has numbers to denote positions (1, 2, 3, 4, 5) to turn the valve. To turn your 3-way valve, you must PRESS DOWN TO TURN, as noted on the handle itself.
- The orientation of your 3-Way valve is very important. Please make sure that you have assembled the 3-way valve in the position / direction shown.

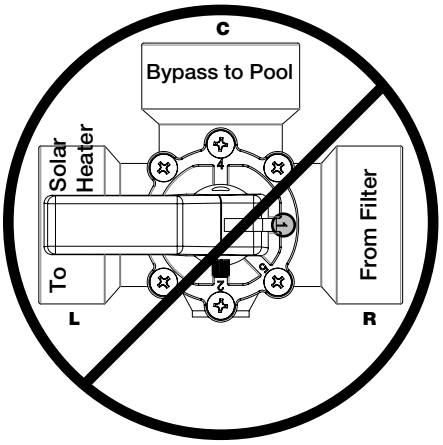




- Make sure that your filter pump system is turned off BEFORE you adjust any setting on your 3-Way Valve

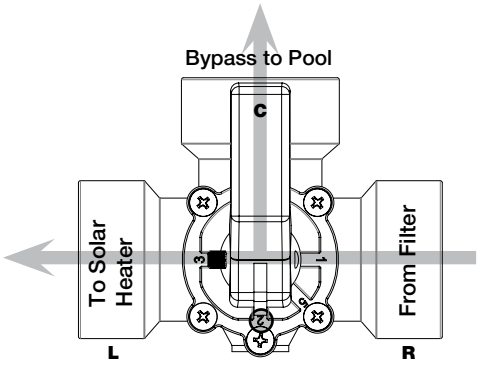
ADJUST THE VALVE POSITION TO YOUR DESIRED SETTING

- Position 1 = **WARNING: Maintenance mode only. Never use this position unless your pump is off. This position blocks ALL water flow from your filter pump into your pool**



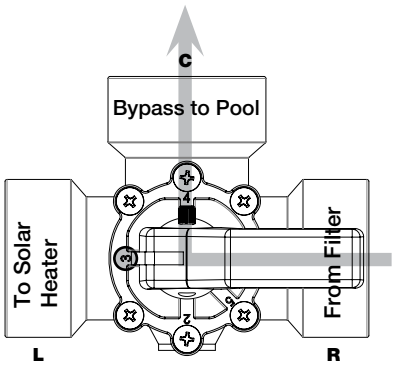
Position 1: Blocks water from heater & pool

- Position 2 = Allows full flow rate of water through the heater and through the bypass into the pool. This setting will not give you optimal heated water temperature



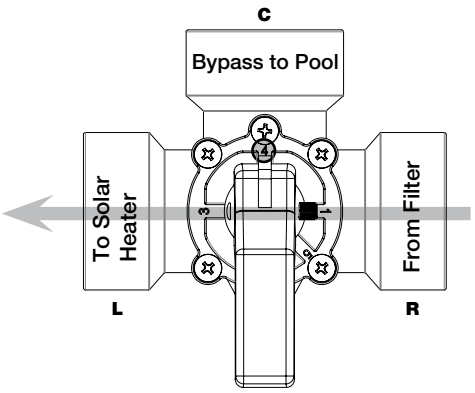
Position 2: 100% flow through solar heater & through bypass to pool

- Position 3 = Directs 100% of the water flow through the bypass hose and directly to your pool. The water from your filter pump will NOT go through the solar heater



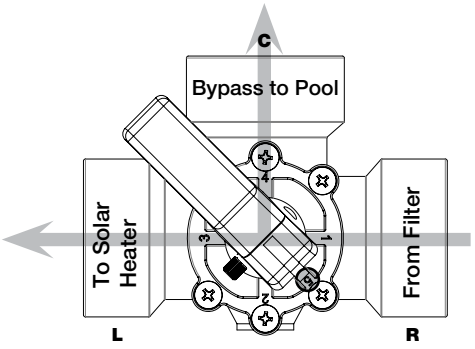
Position 3: 100% water through bypass to pool only

- Position 4 = Directs 100% of the water flow through your solar heater and is recommended to be used with low horsepower filter pumps up to ½ HP



Position 4: 100% water through solar heater

- Position 5 = Allows a half flow of water through the heater and through the bypass into the pool. This position is recommended



Position 5: 50% flow into bypass and solar heater

FAQ's (Frequently Asked Questions)

Q. My pool water doesn't seem to be getting any warmer. What should I do?

A. First check to make sure that water is flowing through the tubes. You can simply lift these up and feel the water within them. Next, check the flow strength at the Pool's return inlet. Can you feel water flowing into the pool? Has your Solar Heater been exposed to the sun light for long periods of time? Remember, one Solar Heater for a 15 – 18 ft pool is recommended. Is your pool larger than this? If you've checked all this, you may have a clog in your tubing. Try to isolate which tube and purge out the clog.

Q. There is a leak at the connection site. What should I do?

A. Hose clamps have been provided to use for all connection sites if able. Make sure these are on properly and tightened.